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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,870	05/27/2005	Toshiyuki Kawaguchi	P/2850-107	4402
2352	7590	09/21/2006	EXAMINER	
OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			NINO, ADOLFO	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 09/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/536,870	Applicant(s) KAWAGUCHI ET AL.	
	Examiner Adolfo Nino	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) * | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

This application contains claims 17 and 20 drawn to an invention nonelected with traverse in Paper No. 1. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5-7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by MacDonald et al. (US 6,195,267 B1).

Regarding claim 1 (currently amended), MacDonald et al. disclose a shielding box (20, fig. 1) comprising a molded body (20) having a box shape (fig. 1), the molded body (20) comprising: a bottom wall (24; fig. 2); side walls (22) formed to rise from the outer peripheries of the bottom wall (fig. 2); and an opening described by the edges of the side walls opposite the bottom wall (figs. 1, 2), the side walls being connected to the bottom wall through elastic connectors made integral with the molded body and of the same material (fig. 2; it would be the outer periphery 22 of housing 20 shaped as a step) formed to act as plate springs with respect to the bottom wall, and at least one of the inner

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surface and outer surface of the molded body being electrically conductive (28; col. 3, lines 36-40).

Regarding claim 5, as best understood by the Examiner, MacDonald et al. disclose the shielding box (20) according to claim 1, wherein the elastic connectors (fig. 2) comprise a rising portion (not marked, but clearly seen in fig. 2) that rises once from the bottom wall toward the opening and a horizontal portion (not marked, but clearly seen in fig. 2) that extends in parallel to the bottom wall (fig. 2), connecting the end of the rising portion opposite the bottom wall and the opposite end of the side wall (fig. 2) or the partition wall.

Regarding claim 6, MacDonald et al. disclose the shielding box (20) according to claim 5, wherein when the distance of the horizontal portions of the elastic connectors is H and the height of the rising portions is V, $H \geq V$ (fig. 2).

Regarding claim 7, as best understood by the Examiner, MacDonald et al. disclose the shielding box (20) according to claim 1, wherein the thickness of the side walls and/or the partition walls is 1 mm or less (col. 3, lines 40-45).

Regarding claim 10, the method of forming the device (i.e. "the molded body *is formed by molding from one sheet of material*" (emphasis added)) is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight. During examination, the patentability of a product-by-process claim is determined by the novelty and non-obviousness of the claimed product itself without consideration of the process for making it, which is recited in the claim. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacDonald et al. (US 6,195,267 B1) in view of Nestor et al. (US 2005/0231932 A1).

Regarding claim 3, MacDonald et al. disclose the shielding box (20) according to claim 1, **except for** having partition walls dividing its interior into a plurality of cells, the partition walls connected to the bottom wall through elastic

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connectors formed to act as plate springs with respect to the bottom wall. Nestor et al. teach that it is known to have partition walls as set forth at paragraph [0029]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the shielding box of MacDonald et al. with partitions walls, as taught by Nestor et al. in order to shield individual components in each chamber created by the partition walls.

Regarding claim 9 (currently amended), the modified MacDonald et al. disclose the shielding box (20) according to claim 3, wherein the partition walls (fig. 1 of Nestor et al.) are divided into a plurality of pieces by slits (130 in fig. 3 of Nestor et al.).

Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacDonald et al. (US 6,195,267 B1).

Regarding claim 4, MacDonald et al. disclose the shielding box (20) according to claim 1, **except for** the shear modulus of elasticity of the material constituting the molded body ranges from 10^5 to 10^9 Pa. The shielding box of MacDonald et al. is comprised of plastic such as polyetherimide or other suitable plastics, which it is well known that plastics have a certain range of shear modulus of elasticity. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the shielding box of MacDonald et al. have a shear modulus of elasticity of the material constituting the molded body ranges from 10^5 to 10^9 Pa, since it has been held that, where

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the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claim 8, MacDonald et al. disclose the shielding box (20) according to claim 1, **except for** the surface resistance of at least one of the inner surface and the outer surface of the molded body ranges from 10^1 to $10^{-2} \Omega/\square$. The shielding box of MacDonald et al. is comprised of plastic such as polyetherimide or other suitable plastics, which it is well known that plastics have a certain range of surface resistance. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the shielding box of MacDonald et al. have a surface resistance of at least one of the inner surface and the outer surface of the molded body ranges from 10^1 to $10^{-2} \Omega/\square$, since it has been held that, where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claims 2, 11-16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacDonald et al. (US 6,195,267 B1) in view of Kishimoto (US 6,700,061 B2).

Regarding claim 2 (currently amended), MacDonald et al. disclose a shielding box (20) for blocking electromagnetic waves that is housed in a case and covers electronic circuits on a wiring board (10), the shielding box (20)

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comprising a molded body (20) having a box shape (FIG. 1), the molded body (20) comprising: a bottom wall (24; Fig. 2); side walls (22) formed to rise from the outer peripheries of the bottom wall (fig. 2); and an opening (not marked, but clearly seen in fig. 2) described by the edges of the side walls opposite the bottom wall (fig. 2); at least one of the inner surface and outer surface of the molded body having a metal thin film (28) formed by physical deposition; and the ends of the side walls (22) at the opening side making contact with the wiring board while a portion of the shielding box being pressed by an inner wall of the case elastically deforms when securing the shielding box and the wiring board (fig. 2), **but MacDonald et al. do not disclose** the ends of the side walls (22) at the opening side to be in direct contact with the wiring board. Kishimoto teaches that it is known to have the ends of the side walls of a shielding box at the opening side to be in direct contact with the wiring board as set forth at figure 12. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the ends of the side walls of a shielding box of MacDonald et al. at the opening side to be in direct contact with the wiring board, as taught by Kishimoto in order to have a more stable housing. **Note** that the method of forming the device (i.e. "the molded body having a metal thin film *formed by physical deposition*" (emphasis added)) is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight. During examination, the patentability of a product-by-process claim is determined by the novelty and non-obviousness of the claimed product

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itself without consideration of the process for making it, which is recited in the claim. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

Regarding claim 11 (currently amended), the modified MacDonald et al. disclose the shielding box (20) according to claim 2, wherein the free height of the shielding box is larger than a gap formed between the inner surface of the case and the wiring board facing each other, the gap being in the space surrounded by the case in which the shielding box is housed and the wiring board (fig. 2).

Regarding claim 12 (Original), the modified MacDonald et al. disclose the shielding box (20) according to claim 2, wherein the side walls (22) are connected to the bottom wall (24) through elastic connectors (fig. 2) formed to function as plate springs with respect to the bottom wall (fig. 2).

Regarding claim 13 (Original), the method of forming the device (i.e. "the metal thin film from physical deposition *is formed by using a facing target-type sputtering apparatus*" (emphasis added)) is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight. During examination, the patentability of a product-by-process claim is determined by the novelty and non-obviousness of the claimed product itself without consideration of the process for making it, which is recited in the claim. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

Regarding claim 14 (Original), MacDonald et al. disclose the shielding box (20) according to claim 2, **except for** wherein the surface resistance of at least one of the inner surface and the outer surface of the molded body ranges from

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10^{-1} to 10^{-2} 10^{-1} to 10^{-2} Ω/\square , and the relationship between the thickness T (nm) and the surface resistance R (Ω/\square) of the metal thin film satisfies the condition $T \times R < 200$ in a range of $20 < T < 200$. The shielding box of MacDonald et al. is comprised of plastic such as polyetherimide or other suitable plastics, which it is well known that plastics have a certain range of surface resistance. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the shielding box of MacDonald et al. have a surface resistance of at least one of the inner surface and the outer surface of the molded body ranges from 10^{-1} to 10^{-2} 10^{-1} to 10^{-2} Ω/\square , and the relationship between the thickness T (nm) and the surface resistance R (Ω/\square) of the metal thin film satisfies the condition $T \times R < 200$ in a range of $20 < T < 200$, since it has been held that, where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claim 15 (Original), the modified MacDonald et al. disclose the shielding box (20) according to claim 2, wherein the metal thin film (28) is made from a plurality of metals (col. 3, line 39).

Regarding claim 16 (Original), MacDonald et al. disclose the shielding box (20) according to claim 2, **except for** the metal thin film being a brass thin film. It is well known to use brass as a shielding against electromagnetic waves. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the shielding box of MacDonald et al. to have a metal thin film being a brass thin film instead of the nickel or gold metal film

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stated by MacDonald et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 19 (New), MacDonald et al. disclose the shielding box (20) according to claim 2, **except for** the surface resistance of at least one of the inner surface and the outer surface of the molded body ranges from 10^1 to $10^{-2} \Omega/\square$. The shielding box of MacDonald et al. is comprised of plastic such as polyetherimide or other suitable plastics, which it is well known that plastics have a certain range of surface resistance. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the shielding box of MacDonald et al. have a surface resistance of at least one of the inner surface and the outer surface of the molded body ranges from 10^1 to $10^{-2} \Omega/\square$, since it has been held that, where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over MacDonald et al. (US 6,195,267 B1) in view of Kishimoto (US 6,700,061 B2) as applied to claim 2 above, and further in view of Nestor et al. (US 2005/0231932 A1). The modified MacDonald et al. disclose the shielding box (20) according to claim 2, **except for** having partition walls dividing its interior into a plurality of cells, the partition walls connected to the bottom wall through elastic connectors formed to act as plate springs with respect to the bottom wall. Nestor et al. teach

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that it is known to have partition walls as set forth at paragraph [0025]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the shielding box of MacDonald et al. with partitions walls, as taught by Nestor et al. in order to shield individual components in each chamber created by the partition walls.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gabower (US 6,624,353 B2) discloses an electromagnetic interference shield. West (US 6,949,706 B2) discloses a shield. Martin et al. (US 6,787,695 B2) disclose an ergonomic shield. Davidson et al. (US 6,297,967 B1) disclose a self-securing RF screened housing. Davidson (US 5,895,884) discloses a shielding device with push fit lid. Mok et al. (US 5,704,117) discloses an EMI shielding. Hirvonen et al. (US 5,400,949) disclose a circuit board assembly.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory

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action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

Applicant's arguments filed 7/10/06 have been fully considered but they are not persuasive. Regarding argument to currently amended independent claim 1, found in Amendment filed 7/10/06, REMARKS section, starting at last line of page 7, that: "...although the plastic housing of the shielding box of MacDonald et al. has a structure...similar to the... present invention, electrically conductive gel and thermally conductive gel are the parts which function as a shock absorber of the shielding box. Therefore, the shielding box of MacDonald et al. is made up of two principal parts of different materials; a shock absorber made of electrically and thermally conductive gels, and an electromagnetic shield made of the plastic housing.", the Examiner would like to point out that the side walls of the plastic housing of the shielding box of MacDonald et al. act as the plate springs for, as noted by Applicants that the plastic housing of the shielding box of MacDonald et al. has a structure similar to the present invention, it is the stepped-shape of the side walls of the shielding box of MacDonald et al. that act as plate springs.

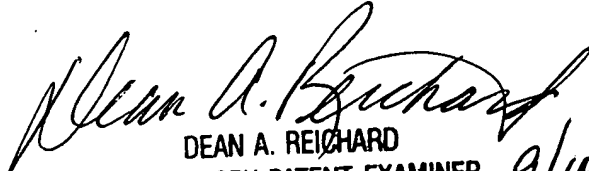
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Applicant's arguments with respect to currently amended independent claim 2 and dependent claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolfo Nino whose telephone number is (571) 272-1981. The examiner can normally be reached on M-F 8:00--4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AN


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